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(71) Applicant(s)

(56) Documents Cited  
GB 2277797 A GB 2258301 A GB 2258300 A  
WO 88/03327 A US 5143443 AGeorge Edward Wetherill  
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(54) Abstract Title

Starcloth

(57) A starcloth formed from a sheet 2 of flexible material, preferably a textile, to which is fixed a plurality of small electrical lamps 4 which are inserted through holes 6 in the sheet. The lamps may each be provided with a cover 18 of a resilient, coloured material, the covers being readily removable from the lamps. The lamps and covers may be firmly held on the sheet by means of a grommet 10. This arrangement provides an easy way of changing the colour of the lamps without having to remove the lamps from the sheet.

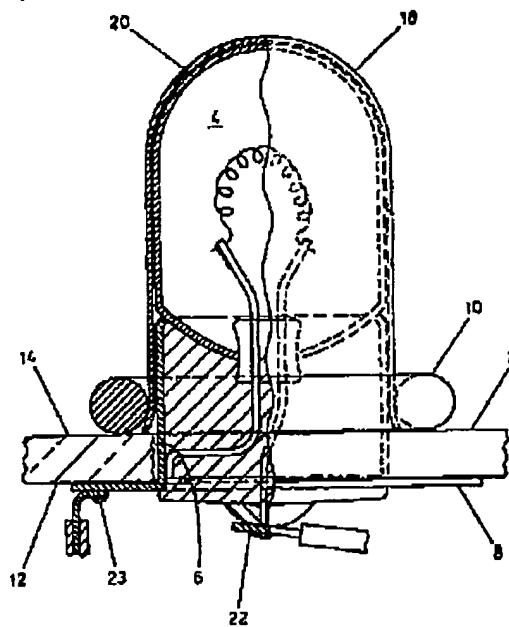


FIG. 1

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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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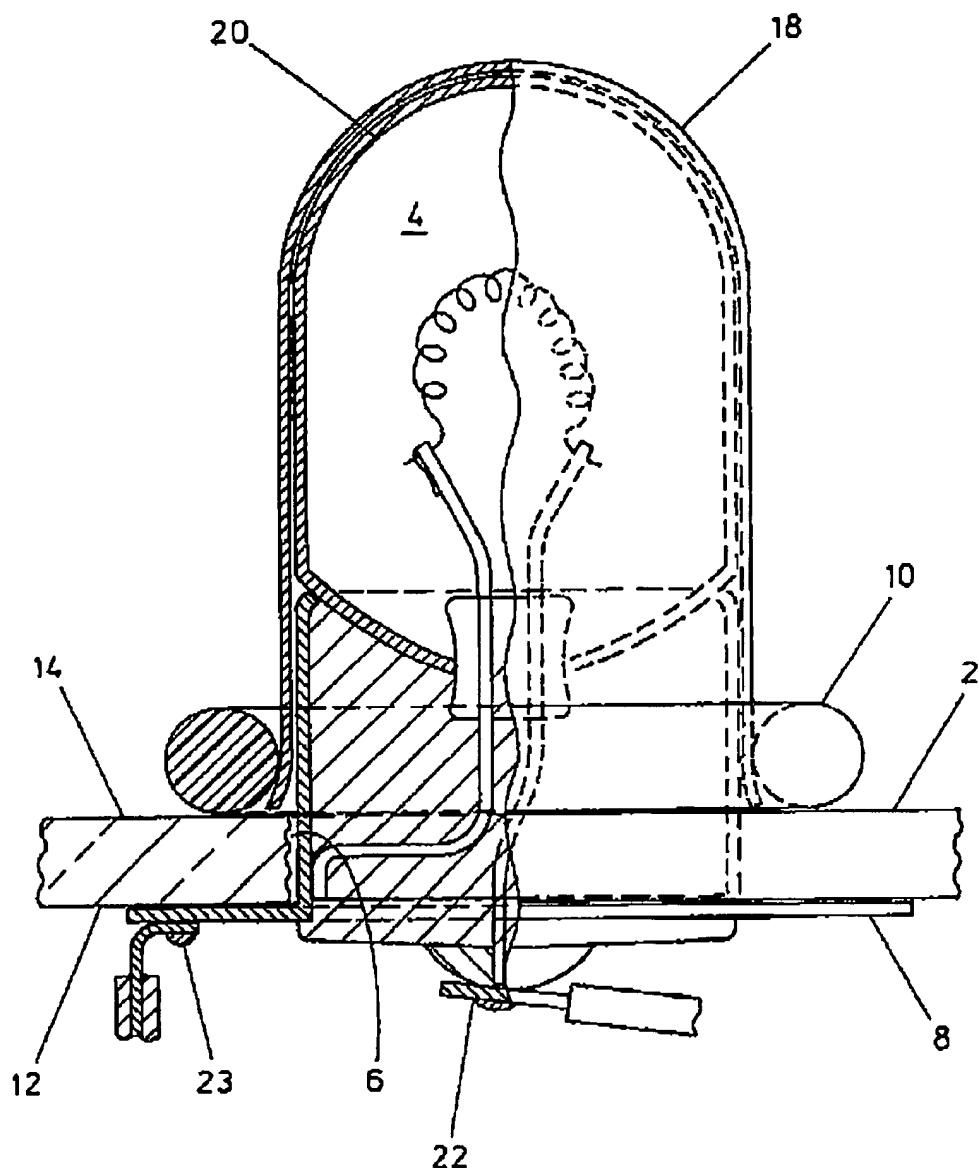


FIG. 1

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**Starcloth**

5 The present invention relates to a sheet of flexible material to which is fixed a plurality of small electrical lamps. By "small" is meant having a bulb diameter no more than 15 mm and a bulb length no more than 30 mm. Such sheets and lamps together are known as "starcloths" and will be referred to hereafter as such.

10 Starcloths, made of a flexible material such as a textile cloth, are known in the entertainment industry as backdrops for stage performances or suchlike where a performer or performers stand out against, for instance, a black cloth background over which appear points of light created by small and low power electrical lamps often rated at 28 volts by 0.04  
15 amps which measure some 5 mm x 5 mm diameter each. A single cloth may have an array of several hundred such lamps. To ensure a perfect performance the array must be carefully maintained to ensure the lighting is faultless. Generally the lamps are uncoloured but coloured lamps have been proposed.  
20 However, coloured lamps which are coloured by dipping the lamps in a coloured medium which hardens to provide a permanent film are some 60% more expensive than uncoloured "white" lamps. Also because it is normal to solder the lamps onto the wiring to ensure reliability it takes a long time and it is troublesome to change a starcloth from, say, a black cloth with white lights to the same cloth with coloured lamps  
25 or to change a coloured lamp array on a blue cloth to the same array on a white cloth.

30 A starcloth according to the invention comprises a sheet of flexible material to which is fixed a plurality of small electrical lamps, a plurality of covers formed of a resilient coloured material removably mounted over at least some of the lamps.  
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The covers are easy and quick to fit over the lamps and provide a simple and economic way of changing the colour characteristics of the starcloth without changing the lamps. The cost of colouring the lamps is also much less.

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Preferably each cover is formed so as to fit closely around the glass bulb of each lamp. This helps to retain the cover on the lamp.

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The cover may be further held in place by a resilient grommet fitted over the cover and which assists in fixing the lamp to the flexible material which is preferably a cloth.

15

An embodiment of the invention will now be described by way of example and with reference to Figure 1 which shows a part of a starcloth in partial cross section.

20

The starcloth comprises a sheet of textile material 2 which may be several metres square. Spaced over the surface of the sheet are a "sprinkling" of lamps 4 each of which is fixed to the sheet by being inserted into a respective hole 6 and then by means of the lamp's flange 8 and a grommet 10 which act on opposed surfaces 12 and 14 of the sheet the lamp is secured.

25

Before placing the grommet over the bulb, a sheath-like cover 18 of a chosen colour, say, amber, green, red or blue or opaque, is fitted tightly over the glass bulb 20 of the lamp 4. The cover formed of an elastomeric material such as rubber or a suitable polymer which retains its resilience is pushed well down over the lamp and the grommet 10 is pushed over the cover to secure not only the lamp but also the cover.

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The coloured cover can quickly be removed by rolling the grommet off the bulb and peeling off the cover and then replacing the grommet.

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Usually the lamps are soldered to the wiring harness as at 22 and 23 rather than providing a screw-in type holder because of the problem with lamps coming unscrewed and inoperative during transit of starcloths. Thus any change of colour without using covers would be very time consuming or else a complete harness would have to be changed.

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CLAIMS

- 5 1. A starcloth comprising a sheet of flexible material to which is fixed a plurality of small electrical lamps, a plurality of covers formed of a resilient coloured material removably mounted over at least some of the lamps.
- 10 2. A starcloth as claimed in Claim 1 wherein each cover is formed so as to fit closely around the glass bulb of each lamp.
- 15 3. A starcloth according to Claim 1 or 2 further comprising a grommet for each lamp, each grommet being formed of resilient material and so arranged to fit over a respective said lamp.
- 20 4. A starcloth according to any one of Claims 1 to 3 wherein each lamp has a flange and wherein the sheet of flexible material abuts on the flange.
5. A starcloth substantially as described with reference to the accompanying drawing.



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Patent  
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Application No: GB 9721641.0  
Claims searched: 1 to 5

Examiner: Graham S. Lynch  
Date of search: 24 November 1997

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:  
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 Int Cl (Ed.6): F21P 3/00, 5/02; F21V 9/08, 33/00; A63J 1/00, 3/00, 5/00, 5/02  
 Other: On-line: WPI

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
Y	GB 2277797 A HORRELL. Whole document.	1 to 4
Y	GB 2258301 A OSHINO ELECTRIC. Figures 1 to 4, 10. Page 2, lines 12 to 17. Page 6, lines 1 to 27.	1, 2 and 4
Y	GB 2258300 A EISEN BRAUN REISS. Figures 4 and 5. Page 8, lines 11 to 18.	3
Y	WO 88/03327 COLOURCOVER LTD. Figures. Page 2, line 15 to page 3, line 22.	1, 2 and 4
Y	US 5143443 INTEGRATED SYSTEMS. Figures 1 to 5. Column 2, line 45 to column 3, line 2.	1, 2 and 4

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

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